

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-025350**Date Inspected:** 26-Jul-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Tony Sherwood**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

**Orthotropic Bridge Girder (OBG) Sections:**

11W/12W – C2: This QA Inspector randomly observed ABF welding personnel Jorge Lopez (#6149) using the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) and flat (1G) positions on the inside of this OBG section. The welding was performed on both the C2 and D1 sections of the OBG. The area was the transition area between the two welds and where the flux Cored Arc Welding (FCAW) process using the Bug-O track system was not accessible. This QA Inspector randomly observed QC Inspector Tony Sherwood monitoring the work being performed. This QA Inspector verified the following welding parameters; 138 amperes using a 3.2 mm diameter E7018H4R electrode. This QA Inspector verified the preheat being greater than 150°F using an electronic temperature gauge. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1110A Rev-1. This QA Inspector periodically observed QC Inspector Tony Sherwood monitoring the work at this location. Welding at this location appeared to be completed this date.

10W/11W-C2: This QA Inspector randomly observed ABF welding personnel James Zhen (#6001) and Jin Pei Wang (#7299) using the Flux Cored Arc Welding (FCAW) process in the overhead (4G) position on the outside

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(back gouged side) of this OBG section. This QA Inspector randomly observed QC Inspector Pat Swain monitoring the work being performed. QC Inspector Pat Swain informed this QA Inspector of the following welding parameters; 245 amperes and 24.5 volts at a travel speed of 173 mm per minute to produce a heat input value of 2.08 KJ per mm. The welding observed appeared to comply with ABF-WPS-D15-3042B-1. This QA Inspector periodically observed QC Inspector Pat Swain monitoring the work at this location.

This QA Inspector was informed by QC Inspector Bonifacio Daquinag Jr. that all QC inspections (visual, MT and UT) had been completed and accepted at weld joint 11E/12E-B. This QA Inspector was informed by QA Inspector Doug Frey that he had performed and accepted the visual verification and Magnetic Particle Testing of this weld joint.

This QA Inspector performed Ultrasonic Testing (UT) on the following welding joints after having been notified that all QC Inspections had been performed and accepted;

11E/12E-B – The area of inspection was greater than 15% of the entire weld length

11W/12W-B – The area of inspection was greater than 15% of the entire weld length and also included the transition area between the backing bar on A deck and this weld joint.

11W/12W-F – The area of inspection was greater than 15% of the entire weld length and included both repair areas.

The UT verifications performed as noted above appeared to comply with the contract requirements. This QA Inspector informed QC Inspector Bonifacio Daquinag Jr. of the findings. For further details see the Ultrasonic Testing Report (TL-6027) completed this date.

### Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted below there were no notable conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hager,Craig
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell,Bill
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QA Reviewer
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